RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _/0/540,634_

Source: _, P4/10_

Date Processed by STIC: _7/7/05_

ENTERED

PCT

```
RAW SEQUENCE LISTING                 DATE: 07/07/2005
PATENT APPLICATION:  US/10/540,634   TIME: 09:46:02

Input Set : N:\DA\PTO.DA.txt
Output Set: N:\CRF4\07072005\J540634.raw
```

```
      4 <110> APPLICANT: DE WILDE, Gert Jules Hector
      6 <120> TITLE OF INVENTION: KINASE SEQUENCES USEFUL FOR DEVELOPING COMPOUNDS FOR THE
PREVENTION
      7       AND/OR TREATMENT OF METABOLIC DISEASES AND NUCLEOTIDE SEQUENCES ENCODING SUCH
      8       KINASE SEQUENCES
     10 <130> FILE REFERENCE: D0590.70034US01
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/540,634
C--> 13 <141> CURRENT FILING DATE: 2005-06-23
     15 <150> PRIOR APPLICATION NUMBER: GB 0230014.3
     16 <151> PRIOR FILING DATE: 2003-12-23
     18 <150> PRIOR APPLICATION NUMBER: US 60/436,380
     19 <151> PRIOR FILING DATE: 2003-12-23
     21 <160> NUMBER OF SEQ ID NOS: 13
     23 <170> SOFTWARE: PatentIn version 3.1
     25 <210> SEQ ID NO: 1
     26 <211> LENGTH: 2949
     27 <212> TYPE: DNA
     28 <213> ORGANISM: Caenorhabditis elegans
     30 <400> SEQUENCE: 1
     31 atggcgcctg ccgtcttaca aaaacccggt gttatcaagg atccatcgat tgctgcattg     60
     33 ttcagtaata aggatccaga gcagagatat caagatttaa gagaaattgg acatggatct    120
     35 tttggagctg tctattttgc atatgacaaa aaaaatgagc agactgttgc gattaaaaag    180
     37 atgaatttta gtggaaaaca ggctgtcgaa aaatggaatg atattcttaa agaagtgtct    240
     39 tttctgaata cagttgttca tccacatatt gtcgactaca aggcttgttt cttaaggac     300
     41 actacatgtt ggcttgtgat ggagtactgt attggctctg cagccgatat agtggatgtc    360
     43 ttgcgaaaag gaatgcgaga agtcgaaatc gctgcgattt gctctcaaac tttggatgct    420
     45 cttcgatatc ttcactctct gaagcgaata catcgagata ttaaagctgg aaatattctg    480
     47 ctatctgatc atgctattgt taaactagct gatttcggat ccgcatccct ggtagatccg    540
     49 gctcaaactt tcatcggaac gccgtttttc atggccccag aggtaattct ggcaatggat    600
     51 gagggtcact acacggatcg tgcagatatt tggtcattgg gtatcacgtg tatagagctg    660
     53 gccgaacgtc gtccaccatt gttcagtatg aatgcaatgt ctgccctcta ccatattgct    720
     55 caaaatgatc ctccaactct ttctccaatt gacactagcg aacaaccgga atggtcgctg    780
     57 gaattcgttc aatttataga caaatgtctt cgaaaaccag cagaagagcg aatgtcagct    840
     59 gaagaatgct ttcgacatcc attcattcaa cggtctcgcc catcagacac aattcaggaa    900
     61 ctcattcaga gaacgaaaaa tatggtatta gagttggata attttcaata caaaaagatg    960
     63 agaaaactca tgtatttgga tgaaacagaa ggaaaagaag gaagtgaagg aaatggagca   1020
     65 tctgatgatt tagattttca tggaaatgaa gctaattcaa ttggaagagc aggagattct   1080
     67 gcgtcatctc gaagtgcttc tcttacttct ttccgatcaa tgcagagtag tggaggagct   1140
     69 ggtcttttag tgtccaccaa tacgacgggt gctatggata tgtgcatgg atcctctgga   1200
     71 tacggtaatg gaagtagttc gacgacgagc tccgcacgcc gccgtcctcc aattccttcg   1260
     73 caaatgctct cttctacatc aacgtctggt gttggaacta tgccgagtca tggatcagtt   1320
     75 ggagcatcga ttacggcgat cgcagtcaat ccaacaccgt ctccttcaga acctatccca   1380
     77 acatcacaac caacatcgaa atcagaatca tcttctatac tcgaaactgc acacgatgat   1440
     79 cctttggaca cgtcgatacg tgctccagtg aaagacttgc atatgccgca tcgagcagtc   1500
```

```
 81 aaggaacgaa tagccacgtt gcaaaatcac aaattcgcga cgcttcgttc ccagagaata   1560
 83 atcaatcagg aacaagaaga atatacgaaa gagaacaata tgtatgagca aatgagcaag   1620
 85 tacaagcatc tacgacaagc acatcacaaa gagctccaac aatttgaaga acgatgtgca   1680
 87 ttagatagag agcaactgcg tgtgaaaatg gatcgagaac tcgaacaatt gacaacgaca   1740
 89 tactcgaaag aaaagatgag agtgaggtgt tcacagaata atgaactaga caaacggaaa   1800
 91 aaagatatcg aagatgggga gaaaaagatg aaaaagacga aaaatagtca aaatcagcag   1860
 93 cagatgaaac tgtattcagc gcaacaattg aaagaataca agtataacaa ggaggcacag   1920
 95 aaaacacgat tacgaagtct gaacatgcct cgaagtactt atgagaacgc aatgaaagaa   1980
 97 gtgaaagccg atctgaatcg agtgaaagat gcacgggaaa atgattttga cgagaagctt   2040
 99 cgtgcagaac ttgaagatga aattgtaagg tatcgcaggc aacaactcag taatcttcat   2100
101 caattggaag aacaattgga tgatgaagac gtaaacgtgc aagaacgcca aatggacacg   2160
103 cgtcacggat tactgtcaaa gcagcatgaa atgacgcgcg atttggaaat acagcatctc   2220
105 aacgagcttc acgcgatgaa aaaacgacat ttggagacac aacacgaggc ggaatcggca   2280
107 agtcaaaatg agtacacaca gaggcaacag gatgaattga gaaaaaagca tgcgatgcag   2340
109 tcaagacaac agccaagaga tttaaagatc caagaagcac aaattcgaaa acaataccga   2400
111 caagttgtga agactcagac tcgccaattt aagctctacc ttacacaaat ggtgcaagta   2460
113 gttccaaaag atgaacaaaa agagctcacg tctcgactaa aacaggatca aatgcaaaaa   2520
115 gtcgcacttc ttgcttcaca atacgaaagt caaatcaaaa aaatggttca ggataagaca   2580
117 gtgaagctcg agtcgtggca agaagatgaa caacgggttc ttagtgagaa gttggagaaa   2640
119 gaattggaag aattgattgc ttatcagaag aagacgagag ccacattaga agagcagatt   2700
121 aaaaaggaac gtacggcact cgaagaacga attggcacac gacgtgcaat gcttgaacag   2760
123 aagattattg aagaacgcga acaaatggga gaaatgcgtc gactaaagaa ggagcaaatc   2820
125 cgtgatcgac acagtcaaga acgccatcgt ctcgagaatc atttcgtacg gacgggctcg   2880
127 acgagcagaa gttctggtgg gatcgctcct ggtgttggga attcaagcag tattcagatg   2940
129 gctatgtag                                         ~                   2949
132 <210> SEQ ID NO: 2
133 <211> LENGTH: 982
134 <212> TYPE: PRT
135 <213> ORGANISM: Caenorhabditis elegans
137 <400> SEQUENCE: 2
139 Met Ala Pro Ala Val Leu Gln Lys Pro Gly Val Ile Lys Asp Pro Ser
140 1               5                   10                  15
143 Ile Ala Ala Leu Phe Ser Asn Lys Asp Pro Glu Gln Arg Tyr Gln Asp
144             20                  25                  30
147 Leu Arg Glu Ile Gly His Gly Ser Phe Gly Ala Val Tyr Phe Ala Tyr
148         35                  40                  45
151 Asp Lys Lys Asn Glu Gln Thr Val Ala Ile Lys Lys Met Asn Phe Ser
152     50                  55                  60
155 Gly Lys Gln Ala Val Glu Lys Trp Asn Asp Ile Leu Lys Glu Val Ser
156 65                  70                  75                  80
159 Phe Leu Asn Thr Val Val His Pro His Ile Val Asp Tyr Lys Ala Cys
160             85                  90                  95
163 Phe Leu Lys Asp Thr Thr Cys Trp Leu Val Met Glu Tyr Cys Ile Gly
164             100                 105                 110
167 Ser Ala Ala Asp Ile Val Asp Val Leu Arg Lys Gly Met Arg Glu Val
168         115                 120                 125
171 Glu Ile Ala Ala Ile Cys Ser Gln Thr Leu Asp Ala Leu Arg Tyr Leu
172     130                 135                 140
175 His Ser Leu Lys Arg Ile His Arg Asp Ile Lys Ala Gly Asn Ile Leu
```

RAW SEQUENCE LISTING   DATE: 07/07/2005
PATENT APPLICATION: US/10/540,634   TIME: 09:46:02

Input Set : N:\DA\PTO.DA.txt
Output Set: N:\CRF4\07072005\J540634.raw

```
176 145                 150                 155                 160
179 Leu Ser Asp His Ala Ile Val Lys Leu Ala Asp Phe Gly Ser Ala Ser
180                 165                 170                 175
183 Leu Val Asp Pro Ala Gln Thr Phe Ile Gly Thr Pro Phe Phe Met Ala
184                 180                 185                 190
187 Pro Glu Val Ile Leu Ala Met Asp Glu Gly His Tyr Thr Asp Arg Ala
188             195                 200                 205
191 Asp Ile Trp Ser Leu Gly Ile Thr Cys Ile Glu Leu Ala Glu Arg Arg
192         210                 215                 220
195 Pro Pro Leu Phe Ser Met Asn Ala Met Ser Ala Leu Tyr His Ile Ala
196 225                 230                 235                 240
199 Gln Asn Asp Pro Pro Thr Leu Ser Pro Ile Asp Thr Ser Glu Gln Pro
200                 245                 250                 255
203 Glu Trp Ser Leu Glu Phe Val Gln Phe Ile Asp Lys Cys Leu Arg Lys
204                 260                 265                 270
207 Pro Ala Glu Glu Arg Met Ser Ala Glu Glu Cys Phe Arg His Pro Phe
208             275                 280                 285
211 Ile Gln Arg Ser Arg Pro Ser Asp Thr Ile Gln Glu Leu Ile Gln Arg
212         290                 295                 300
215 Thr Lys Asn Met Val Leu Glu Leu Asp Asn Phe Gln Tyr Lys Lys Met
216 305                 310                 315                 320
219 Arg Lys Leu Met Tyr Leu Asp Glu Thr Glu Gly Lys Glu Gly Ser Glu
220                 325                 330                 335
223 Gly Asn Gly Ala Ser Asp Asp Leu Asp Phe His Gly Asn Glu Ala Asn
224                 340                 345                 350
227 Ser Ile Gly Arg Ala Gly Asp Ser Ala Ser Ser Arg Ser Ala Ser Leu
228             355                 360                 365
231 Thr Ser Phe Arg Ser Met Gln Ser Ser Gly Gly Ala Gly Leu Leu Val
232         370                 375                 380
235 Ser Thr Asn Thr Thr Gly Ala Met Asp Asn Val His Gly Ser Ser Gly
236 385                 390                 395                 400
239 Tyr Gly Asn Gly Ser Ser Ser Thr Thr Ser Ser Ala Arg Arg Arg Pro
240                 405                 410                 415
243 Pro,Ile Pro Ser Gln Met Leu Ser Ser Thr Ser Thr Ser Gly Val Gly
244                 420                 425                 430
247 Thr Met Pro Ser His Gly Ser Val Gly Ala Ser Ile Thr Ala Ile Ala
248             435                 440                 445
251 Val Asn Pro Thr Pro Ser Pro Ser Glu Pro Ile Pro Thr Ser Gln Pro
252         450                 455                 460
255 Thr Ser Lys Ser Glu Ser Ser Ser Ile Leu Glu Thr Ala His Asp Asp
256 465                 470                 475                 480
259 Pro Leu Asp Thr Ser Ile Arg Ala Pro Val Lys Asp Leu His Met Pro
260                 485                 490                 495
263 His Arg Ala Val Lys Glu Arg Ile Ala Thr Leu Gln Asn His Lys Phe
264             500                 505                 510
267 Ala Thr Leu Arg Ser Gln Arg Ile Ile Asn Gln Glu Gln Glu Glu Tyr
268         515                 520                 525
271 Thr Lys Glu Asn Asn Met Tyr Glu Gln Met Ser Lys Tyr Lys His Leu
272         530                 535                 540
```

RAW SEQUENCE LISTING   DATE: 07/07/2005
PATENT APPLICATION: US/10/540,634   TIME: 09:46:02

Input Set : N:\DA\PTO.DA.txt
Output Set: N:\CRF4\07072005\J540634.raw

```
275 Arg Gln Ala His His Lys Glu Leu Gln Gln Phe Glu Glu Arg Cys Ala
276 545                 550                 555                 560
279 Leu Asp Arg Glu Gln Leu Arg Val Lys Met Asp Arg Glu Leu Glu Gln
280             565                 570                 575
283 Leu Thr Thr Thr Tyr Ser Lys Glu Lys Met Arg Val Arg Cys Ser Gln
284             580                 585                 590
287 Asn Asn Glu Leu Asp Lys Arg Lys Lys Asp Ile Glu Asp Gly Glu Lys
288         595                 600                 605
291 Lys Met Lys Lys Thr Lys Asn Ser Gln Asn Gln Gln Gln Met Lys Leu
292     610                 615                 620
295 Tyr Ser Ala Gln Gln Leu Lys Glu Tyr Lys Tyr Asn Lys Glu Ala Gln
296 625                 630                 635                 640
299 Lys Thr Arg Leu Arg Ser Leu Asn Met Pro Arg Ser Thr Tyr Glu Asn
300             645                 650                 655
303 Ala Met Lys Glu Val Lys Ala Asp Leu Asn Arg Val Lys Asp Ala Arg
304             660                 665                 670
307 Glu Asn Asp Phe Asp Glu Lys Leu Arg Ala Glu Leu Glu Asp Glu Ile
308         675                 680                 685
311 Val Arg Tyr Arg Arg Gln Gln Leu Ser Asn Leu His Gln Leu Glu Glu
312     690                 695                 700
315 Gln Leu Asp Asp Glu Asp Val Asn Val Gln Glu Arg Gln Met Asp Thr
316 705                 710                 715                 720
319 Arg His Gly Leu Leu Ser Lys Gln His Glu Met Thr Arg Asp Leu Glu
320             725                 730                 735
323 Ile Gln His Leu Asn Glu Leu His Ala Met Lys Lys Arg His Leu Glu
324             740                 745                 750
327 Thr Gln His Glu Ala Glu Ser Ala Ser Gln Asn Glu Tyr Thr Gln Arg
328         755                 760                 765
331 Gln Gln Asp Glu Leu Arg Lys Lys His Ala Met Gln Ser Arg Gln Gln
332     770                 775                 780
335 Pro Arg Asp Leu Lys Ile Gln Glu Ala Gln Ile Arg Lys Gln Tyr Arg
336 785                 790                 795                 800
339 Gln Val Val Lys Thr Gln Thr Arg Gln Phe Lys Leu Tyr Leu Thr Gln
340             805                 810                 815
343 Met Val Gln Val Val Pro Lys Asp Glu Gln Lys Glu Leu Thr Ser Arg
344             820                 825                 830
347 Leu Lys Gln Asp Gln Met Gln Lys Val Ala Leu Leu Ala Ser Gln Tyr
348         835                 840                 845
351 Glu Ser Gln Ile Lys Lys Met Val Gln Asp Lys Thr Val Lys Leu Glu
352     850                 855                 860
355 Ser Trp Gln Glu Asp Glu Gln Arg Val Leu Ser Glu Lys Leu Glu Lys
356 865                 870                 875                 880
359 Glu Leu Glu Glu Leu Ile Ala Tyr Gln Lys Lys Thr Arg Ala Thr Leu
360             885                 890                 895
363 Glu Glu Gln Ile Lys Lys Glu Arg Thr Ala Leu Glu Glu Arg Ile Gly
364         900                 905                 910
367 Thr Arg Arg Ala Met Leu Glu Gln Lys Ile Ile Glu Glu Arg Glu Gln
368     915                 920                 925
371 Met Gly Glu Met Arg Arg Leu Lys Lys Glu Gln Ile Arg Asp Arg His
```

```
372      930                   935                   940
375 Ser Gln Glu Arg His Arg Leu Glu Asn His Phe Val Arg Thr Gly Ser
376 945                   950                   955                   960
379 Thr Ser Arg Ser Ser Gly Gly Ile Ala Pro Gly Val Gly Asn Ser Ser
380               965                   970                   975
383 Ser Ile Gln Met Ala Met
384             980
387 <210> SEQ ID NO: 3
388 <211> LENGTH: 4188
389 <212> TYPE: DNA
390 <213> ORGANISM: Homo sapiens
392 <300> PUBLICATION INFORMATION:
393 <308> DATABASE ACCESSION NO: genbank NM_016281
394 <309> DATABASE ENTRY DATE: 2002-10-04
395 <313> RELEVANT RESIDUES: (1)..(4188)
397 <400> SEQUENCE: 3
398 gccggggaac aagccacagg agagcgactc aggaacaagt gtgggagagg aagcggcggc      60
400 ggcggcgccg ggcccggggg tggtgacagc aggtctgagg ttgcatcata aatacaaagg     120
402 actgaagtta taaaagagaa aagagaagtt tgctgctaaa atgaatctga gcaatatgga     180
404 atattttgtg ccacacacaa aaaggtactg aagatttacc ccccaaaaaa aattgtcaat     240
406 gagaaataaa gctaactgat atcaaaaagc agagcctgct ctactggcca tcatgcgtaa     300
408 aggggtgctg aaggacccag agattgccga tctattctac aaagatgatc ctgaggaact     360
410 ttttattggt ttgcatgaaa ttggacatgg aagttttgga gcagtttatt ttgctacaaa     420
412 tgctcacacc aatgaggtgg tggcaattaa gaagatgtcc tatagtggga agcagaccca     480
414 tgagaaatgg caagatattc ttaaggaagt taaattttta cgacaattga agcatcctaa     540
416 tactattgag tacaaaggct gttacttgaa agaacacact gcttggttgg tgatggaata     600
418 ttgcttaggc tcagcctctg atttattaga agttcataaa aaaccacttc aggaagtgga     660
420 gatcgctgcc attactcatg gagccttgca tggactagcc tacctacatt ctcatgcatt     720
422 gattcatagg gatattaaag caggaaatat tcttctaaca gagccaggtc aggtaaaact     780
424 agctgatttt ggatctgctt caatggcttc tcctgccaac tccttcgtgg gcacaccttа     840
426 ctggatggct ccagaggtga tcttagctat ggatgaagga cagtatgatg ggaaagttga     900
428 tatttggtca cttggcatca cttgtattga attggcggaa cggaagccgc cccttttcaa     960
430 catgaatgca atgagtgcct tatatcacat tgcccagaat gactccccaa cgttacagtc    1020
432 taatgaatgg acagactcct ttaggagatt tgttgattac tgcttgcaga aaatacctca    1080
434 ggaaaggcca acatcagcag aactattaag gcatgacttt gttcgacgag accggccact    1140
436 acgtgtcctc attgacctca tacagaggac aaaagatgca gttcgtgagc tagataacct    1200
438 acagtaccga aaaatgaaaa aaatactttt ccaagagaca cggaatggac ccttgaatga    1260
440 gtcacaggag gatgaggaag acagtgaaca tggaaccagc ctgaacaggg aaatggacag    1320
442 cctgggcagc aaccattcca ttccaagcat gtccgtgagc acaggcagcc agagcagcag    1380
444 tgtgaacagc atgcaggaag tcatggacga gagcagttcc gaacttgtca tgatgcacga    1440
446 tgacgaaagc acaatcaatt ccagctcctc cgtcgtgcat aagaaagatc atgtattcat    1500
448 aagggatgag gcgggccacg gcgatcccag gcctgagccg cggcctaccc agtcagttca    1560
450 gagccaggcc ctccactacc ggaacagaga gcgctttgcc acgatcaaat cagcatcttt    1620
452 ggttacacga cagatccatg agcatgagca ggagaacgag ttgcgggaac agatgtcagg    1680
454 ttataagcgg atgcggcgcc agcaccagaa gcagctgatc gccctggaga caagctgaa     1740
456 ggctgagatg gacgagcacc gcctcaagct acagaaggag gtggagacgc atgccaacaa    1800
458 ctcgtccatc gagctggaga agctggccaa gaagcaagtg gctatcatag aaaaggaggc    1860
460 aaaggtagct gcagcagatg agaagaagtt ccagcaacag atcttggccc agcagaagaa    1920
462 agatttgaca actttcttag aaagtcagaa gaagcagtat aagatttgta aggaaaaaat    1980
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 07/07/2005
PATENT APPLICATION: **US/10/540,634**   TIME: 09:46:03

Input Set : **N:\DA\PTO.DA.txt**
Output Set: **N:\CRF4\07072005\J540634.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:9; N Pos. 72,3245,3263,3278

VERIFICATION SUMMARY   DATE: 07/07/2005
PATENT APPLICATION: **US/10/540,634**   TIME: 09:46:03

Input Set : **N:\DA\PTO.DA.txt**
Output Set: **N:\CRF4\07072005\J540634.raw**

L:12 M:270 C: Current Application Number differs, Replaced Current Application Number
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:1746 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:60
M:341 Repeated in SeqNo=9